



National Aeronautics and Space Administration  
NASA Johnson Space Center  
Houston, TX 77058

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## **Next Space Technologies for Exploration Partnerships -2 (NextSTEP-2)**

**Broad Agency Announcement NNH16ZCQ001K-CDISS**

### **Appendix I: Commercial Destination Development in Low Earth Orbit using the International Space Station**

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## 1.0 Introduction and Background

### 1.1 Background

In 2018, the National Aeronautics and Space Administration (NASA) in conjunction with the Department of Commerce and the Department of State defined four overarching goals for human spaceflight in low-Earth orbit (LEO) in a report submitted to the National Space Council (NSpC):

- To achieve a continuous U.S. presence in LEO – both with government astronauts and with private citizens – in order to support the utilization of space by U.S. citizens, companies, academia, and international partners and to maintain a permanent American foothold on the nearest part of the space frontier.
- To facilitate a regulatory environment in LEO that enables American commercial activities to thrive.
- To conduct human spaceflight research in LEO that will advance the technology and systems required for long-duration spaceflight systems, including systems for interplanetary travel and permanent space habitation.
- To expand and extend commercial opportunity through international partnerships and engagement.

On June 7, 2019, NASA announced it is opening the International Space Station (ISS) for commercial business, unleashing U.S. industry on the path to a commercial economy in low-Earth orbit. With this announcement (see <https://www.nasa.gov/leo-economy/low-earth-orbit-economy/>), “NASA’s Plan for Commercial LEO Development” was published to address both supply and demand, providing a framework of near-term, mid-term and long-term steps that will be taken as well as a five part plan of near-term actions that will build on the work of the last two decades. This solicitation serves as the first element of Part 3 of that plan to initiate the process for commercial development of LEO destinations.

NASA supports public-private partnerships for achieving its strategic goals and objectives for expanding the frontiers of knowledge, capability, and opportunities in space. An important part of NASA’s strategy is to stimulate the commercial space industry to develop commercial capabilities and markets.

### 1.2 Definitions

Commercial Element – any individual habitable module, external platform, or deployable structure attached to ISS, owned and operated by a U.S. Industry Entity to accommodate on-orbit activities.

Commercial Segment – the sum of all Commercial Elements of the contractor at any point in time while attached to the ISS Node 2 Forward port for the purposes of Commercial Demonstration. At least one element of the Commercial Segment shall be a habitable module.

Commercial Destination – temporarily or permanently human-occupied non-governmental platform in LEO, and all commercial business operations and transportation services that are

required to sustain it, which remains technically and financially viable after NASA transitions away from government managed ISS operations.

Commercial Demonstration – conducting Commercial Segment demonstrations for a finite time to validate the proposed commercial capabilities to enable:

- Reliable performance of habitation capabilities
- Supply and return of consumables and products
- Crewed missions that exercise the contractor's Business Approach
- Proposed services targeting NASA's needs as a customer
- Proposed services targeting the contractor's commercial market(s)

Commercial Segment Crew – any Private Astronaut, as defined in the “[NASA Interim Directive \(NID\): Use of the International Space Station \(ISS\) for Commercial and Marketing Activities](#),” who is an employee or customer of the contractor and is to be transported to/from the ISS.

United States Industry Entity – any corporation, partnership, joint venture, association, or other entity that meets the requirements of 51 United States Code (U.S.C.) § 50101, excluding government entities such as NASA Centers, National Laboratories, and Federally Funded Research and Development Centers.

### **1.3 Objectives of Appendix I**

The primary objective of the Next Space Technologies for Exploration Partnerships-2 (NextSTEP-2) Omnibus Broad Area Announcement (BAA) Appendix I is to form a public-private partnership for integration and spaceflight demonstration where the Partner objectives to be accomplished are:

- Successfully deploy one or more habitable commercial elements attached to ISS Node 2 Forward port and demonstrate its ability to provide products and services to a market of Government and commercial customers
- Transition to a long-term, sustainable, commercial, human spaceflight enterprise in LEO where NASA is one of many customers

Through this Appendix, the Government intends to purchase data deliverables and insight to support integration of the Commercial Segment into ISS, and to purchase demonstration of commercial capabilities. The responsibility for developing the commercial markets and achieving commercial viability is on the Partner, not the Government. The requirements for the purchase of commercial services that meet NASA's long-term needs will be developed and released in a future solicitation.

### **1.4 Acquisition Strategy**

Appendix I solicits proposals from U.S. Industry Entities to demonstrate commercial capabilities in a Commercial Segment, consisting of one or more habitable Commercial Elements, owned and operated by industry. Appendix I is only for use of the ISS Node 2 Forward berthing port. The capabilities of the ISS, as defined in the “ISS Commercial Element Port Accommodations

Handbook – Revision B” (ICEPAH) located in the Technical Library (see Section 7.0: Technical Library Access), can be leveraged to accelerate the development and demonstration of the commercial capabilities which will eventually lead to one or more self-sustaining, human space flight Commercial Destinations in LEO. Because the Government is not acquiring hardware delivery, it is NASA’s intention that title to all real or personal property developed or acquired under this contract will remain with the contractor.

Through this Appendix, the Government intends to purchase data deliverables and insight to support integration of the Commercial Segment into ISS, and to purchase demonstration of the commercial capabilities and services that will be offered in the Commercial Segment. NASA intends to select one or more Offerors for award of a contract to complete concept development and early design phases, leading to a down-select approximately 12-18 months from award for prioritization of use of the ISS port for the commercial demonstration. Following the down-select, the awardee will complete the activities necessary to launch and integrate the Commercial Segment with ISS (goal of first element installation/activation as soon as possible but no later than September 30, 2024), with the goal of an eventual transition to a self-sustaining Commercial Destination to serve both NASA and non-NASA needs. Offeror(s) not selected for priority access to Node 2 Forward can, by written request to the Contracting Officer, request an early end date of the Ordering Period of this contract (i.e., Off Ramp) in accordance with the clause entitled “Down-Select Off Ramp Option.”

NASA also plans to issue a separate Appendix K to the NextSTEP-2 Omnibus BAA to enable additional partnerships for development and space flight demonstrations of direct-to-free-flyer Commercial Destinations in LEO. This is the second element of Part 3 of the larger strategy for commercialization of LEO, which is described in more detail at: <https://www.nasa.gov/leo-economy/low-earth-orbit-economy>.

### **1.5 NASA’s Long Term LEO Goals and Objectives**

NASA seeks to enable multiple privately owned and operated destinations in LEO that are commercially viable in the long term, providing services to the Government as one of many customers. NASA seeks to transition away from reliance on the ISS and cost-effectively meet its long-term needs in LEO by purchasing services from commercially owned and operated destination(s) that offer a broad portfolio of products and services to both the commercial market and NASA. NASA’s long-term needs in LEO are as outlined in the report “[Forecasting Future Demand in Low Earth Orbit: Revision Two – Quantifying Demand](#).”

NASA seeks continued use of the LEO microgravity and space environment to conduct basic and applied research and technology demonstrations. In order to open up the design trade space and encourage innovation and efficiencies, NASA is not requiring specific system concepts or configurations. Each Offeror must determine the system requirements and concepts that best fit its target customer base while addressing some or all NASA’s future needs in LEO. NASA will conform to the requirements and configurations of the Commercial Destination(s) for services it acquires.

## 1.6 Definition of Roles

NASA retains overall authority and responsibility for safe ISS operations. The contractor's operations in its Commercial Segment at ISS are subject to review and approval, and shall comply with **BAA Attachment B – Model Contract** Clause H.22 “Authority for Use of ISS for Commercial and Marketing Activities.” The contractor will be responsible for transportation of Commercial Segment crew and cargo. The contractor will be responsible for ensuring the health and safety of any Commercial Segment Crew.

The contractor will be considered a “related entity” as described in **BAA Attachment B – Model Contract** Clause H.22 “Authority for Use of ISS for Commercial and Marketing Activities.”

ISS National Lab: The management of the ISS National Lab will continue under the Center for the Advancement of Science in Space (CASIS) through at least 2024. Any contractor request for use of ISS National Lab resources is subject to vetting by CASIS (see <https://www.issnationallab.org>) and would be part of a separate User Agreement with CASIS.

## 2.0 Funding Opportunity Description of Solicitation Topic

### 2.1 Contract Structure

NASA anticipates awarding firm-fixed-price single-award Indefinite Delivery, Indefinite Quantity (IDIQ) contracts with multiple Contract Line Item Numbers (CLINs) authorized via Task Orders as described in *Table 1: CLIN Descriptions and ISS Integration Milestones* and shown in *Figure 1: Notional ISS Integration Milestone Process Through On-orbit Commercial Demonstration*.

All awardees will receive CLIN 1 Task Order 1 (TO1) for Concept Verification, which is described in **BAA Attachment A – Statement of Work (SOW)**. At the time of contract award, depending on the concept maturity and availability of funds, NASA may award CLIN 1 Task Order 2 (TO2) to one or more awardees for Integration Milestone 1 (IM01) and IM02, which are described in **BAA Attachment A – Statement of Work**.

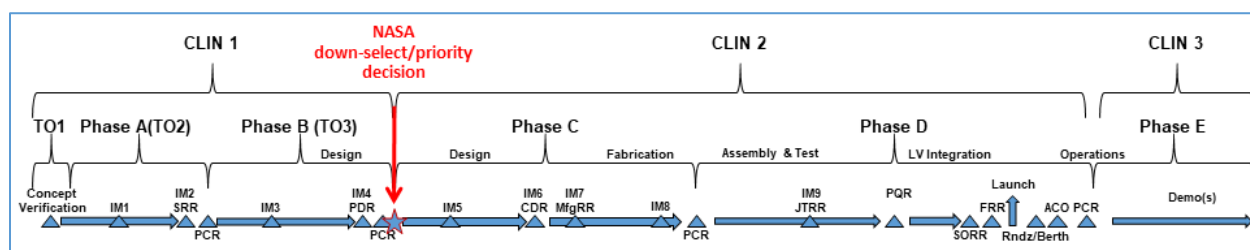
If an awardee's Commercial Segment concept/design consists of more than one Commercial Element, there may be a separate Task Order for each element. However the Offeror may propose to include separate integration milestones for multiple Commercial Elements into one Task Order depending upon concept maturity and development timeline.

NASA intends to require deliverables in each Task Order that address the evolution of and plans for development and operation of the final Commercial Segment.



*Table 1. CLIN Descriptions and ISS Integration Milestones*

CLIN	Description	ISS Integration Milestones (IM)
CLIN 1	Concept Verification through Preliminary Design	Concept Verification (TO1) IM01 – Mission Concept (TO2) IM02 – System Requirements (TO2) IM03 – System Definition IM04 – Preliminary Design
CLIN 2	DDT&E and Operations	IM05 – Design Progress IM06 – Final Design IM07 – Manufacturing Readiness IM08 – Manufacturing Progress IM09 – Integration and Test IM10 – Operations
CLIN 3	Demonstration of Commercial Segment Capabilities	
CLIN 4	Transition to Self-Sustaining LEO Commercial Destination	
CLIN 5	Special Studies	

*Figure 1: Notional ISS Integration Milestone Process Through On-orbit Commercial Demonstration*

## 2.2 General Information for Respondents

**Agency:** National Aeronautics and Space Administration

**Announcement Title:** NextSTEP-2 BAA, Appendix I: Commercial Destination Development in Low Earth Orbit using the International Space Station

**NAICS Code:** 541715 – Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)

**Responsible Office:** International Space Station (ISS) Program Office  
NASA/Johnson Space Center, Mail Code OA  
2101 NASA Parkway  
Houston, Texas 77058

**Point of Contact:** Contracting Officer: Roger Roberts  
Technical POC: David Korth

International Space Station (ISS) Program Office  
NASA Johnson Space Center (JSC)  
E-mail: [NextSTEP-BAA-CDISS@mail.nasa.gov](mailto:NextSTEP-BAA-CDISS@mail.nasa.gov)

**Industry Forum:** A NextSTEP-2 Partnership Industry forum will be held virtually for this Appendix and prospective Offerors will have a chance to submit written questions about this particular solicitation. The tentative date for the forum is **June 27, 2019**. The meeting agenda and related information will be posted to the following website:  
<https://www.fbo.gov/index?s=opportunity&mode=form&tab=core&id=6c7008e1bf035d884057891a261e3b56>.

**Notice of Intent: Due June 28, 2019, 5:00pm Central Time.** To assist in the planning of the proposal evaluation process, NASA strongly encourages the submission of a Notice of Intent (NOI) to propose by all prospective Offerors. The NOI should contain the following information: name, address, telephone number, e-mail address, and institutional affiliation of the respondent, and the solicitation topic in which you intend to propose (NextSTEP-2, Appendix I). NOIs shall be submitted electronically to the Point of Contact e-mail address above. Please note that NOIs are strongly encouraged, but are not required. Not submitting an NOI will not impact the selection process.

**Inquiries: Due June 28, 2019, 5:00pm Central Time.** There will be an opportunity to submit written questions for this Appendix. The questions shall not contain proprietary information nor require proprietary information in the response. NASA's responses to questions will be publicly posted to ensure the information is available to all prospective Offerors. NASA will not provide evaluations, opinions, or recommendations regarding any suggested approaches or concepts. All questions shall be directed via e-mail to [NextSTEP-BAA-CDISS@mail.nasa.gov](mailto:NextSTEP-BAA-CDISS@mail.nasa.gov) no later than the date specified above. Inquiries shall identify the BAA number and this Appendix in the subject field of e-mails.

**Proposals Due:** Proposals must be submitted electronically in accordance with instructions detailed in Section 4.1: Instructions for Proposals no later than **August 5, 2019, 5:00pm Central Time**.

### **3.0 Eligibility Information and Other Considerations**

#### **3.1 Eligibility of Applicants**

##### **3.1.1 Domestic Source Criteria and Compliance**

This Appendix is restricted to United States industry entities as defined in Section 1.2: Definitions. Proposals including international team members shall comply with Section 3.2.1, Guidelines for International Team Members on U.S. Proposals, of the NextSTEP-2 Omnibus BAA.

The selected Offeror(s) shall adhere to 51 United States Code (U.S.C.) § 50131 in performance of this contract by acquiring space transportation services from United States commercial providers. The Offeror(s) also shall comply with the National Space Transportation Policy by

using U.S. manufactured launch vehicles. For a launch vehicle to qualify as a domestic end product, the cost of its components, mined, produced, or manufactured in the United States must exceed fifty (50) percent of the cost of all of its components. The cost of each component includes transportation costs to the place of incorporation into the launch vehicle and any applicable duty (whether or not a duty-free entry certificate is issued). “Components” means those materials and supplies directly incorporated into the domestic end product.

### **3.2 Intellectual Property Considerations**

To support the objectives of this Appendix, the following intellectual property considerations are applicable.

#### **3.2.1 Data Rights**

##### **3.2.1.1 Data Rights (Deviation)**

Contracts awarded under this Appendix will use a different approach to Data Rights. The model contract includes a deviation to the 52.227-14 “Rights in Data - General” clause by which the Government will acquire limited rights, instead of unlimited rights, for data first produced under the contract, if developed partially or exclusively at private expense. The Government only receives unlimited rights in data produced exclusively at Government expense. In event of Termination for Default, the Agency receives an additional right to manufacture for the Government’s benefit/use, but not unlimited rights. (See **BAA Attachment B – Model Contract** Section I, 52.227-14 Rights In Data – General, (Dec 2007) (Deviation) / Alternate I, (Dec 2007) (Deviation) / Alternate II, (Dec 2007) (Deviation) / Alternate III (Dec 2007) (Deviation)).

To assist the Government in its use of the Rights in Data – General (Deviation) clause (FAR 52.227-14) with its Alternates I, II, and III, an Offeror shall, when executing the Model Contract, and consistent with FAR 52.227-15 “Representation of Limited Rights Data and Restricted Computer Software,” represent that it has reviewed the requirements for the delivery of technical data or computer software. In addition, the **BAA Attachment B – Model Contract** includes a Section H clause entitled “Identification and Representation of Limited Rights Data and Restricted Computer Software (Pre-Award),” which provides a “Data Rights Assertion Table” that allows Offerors to identify and represent pertinent data related to its specific limited data rights assertions. Any identification of limited rights data or restricted computer software in the Offeror’s response is not determinative of the status of the data should a contract be awarded to the Offeror. Identification and representations may be made after award pursuant to a Section H clause entitled “Identification and Representation of Limited Rights Data and Restricted Computer Software (Post-Award).” Depending on NASA’s specified needs, irrespective of funding source (NASA or Contractor funded contributions), for technical data, the nature and extent of what is delivered with unlimited rights, and/or limited rights and restricted computer software, may be discussed/negotiated with the Offeror(s).

##### **3.2.1.2 Data Rights Access to Insight Data**

The **BAA Attachment A – Statement of Work** requires the Offeror to provide NASA (i) insight data to support development and integration of the Commercial Segment into ISS and (ii)

corresponding business planning data. Additionally, the **BAA Attachment B – Model Contract (Section H)** includes an Insight Clause emphasizing the importance of the Government’s ability to gain an understanding of the Contractor’s activities to assess the status, critical paths, and risk associated with successfully completing contract requirements, launching and integrating the Commercial Element(s) to ISS, and conducting commercial capability demonstrations. This clause will be used in combination with the Rights in Data – General (Deviation) clause for instances in which Government access to Contractor’s Limited Rights Data is needed, but delivery may not be required.

### 3.2.2 Inventions – Patent Rights

The Government has certain statutory rights in inventions conceived or first actually reduced to practice under a NASA contract. 51 U.S.C. 20135 provides that title to such inventions vests in the United States, except where 35 U.S.C. 202 provides otherwise for nonprofit organizations or small business firms.

Where 51 U.S.C. 20135 applies, a large entity contractor may request a waiver to obtain title to inventions made under the award in accordance with 51 U.S.C. 20135(g) and 14 Code of Federal Regulations (C.F.R.) 1245 Subpart 1. Such a request may be made in advance of the award or within 30 days thereafter as given in NASA FAR Supplement (NFS) 1852.227-71, Requests for Waiver of Rights to Inventions. Even if a waiver request is not made, a large business contractor may request a waiver on individual inventions made during the course of the award. To support the public/private partnership approach of this BAA, the Government intends to grant all waiver requests submitted pursuant to 14 C.F.R. 1245. See **BAA Attachment B – Model Contract Section H, “Statement on Waiver of Rights to Inventions.”**

For all contractors, the patent rights provision in a resulting award will require the disclosure to NASA of all subject inventions made under the contract. NASA considers the reporting of inventions an important metric that will be used to measure whether new technologies are being developed. Reporting of inventions also protects a contractor’s ownership to such inventions since NASA has the right to obtain title in unreported inventions.

### 3.3 Title Rights in Property

Because the Government is not acquiring hardware delivery, it is NASA’s intention that title to all real or personal property developed or acquired under this contract will remain with the contractor.

### 3.4 Corporate Resources

The Offeror shall describe in their proposal their ability to provide a significant financial commitment to the public/private partnership formed under this Appendix using **BAA Attachment J: Corporate Contribution Worksheet**. This commitment must be identified in the *Attachment 9: DRD-001, Commercialization Roadmap* and *Attachment 7: Corporate Contribution Worksheet* of the Offeror’s proposal by clearly describing the Offeror’s contribution of corporate resources through completion of CLIN 3 for each Commercial Element.

A corporate contribution is required, however there is no mandatory minimum contribution required for eligibility under Appendix I. The reasonableness of the corporate contribution will be evaluated as part of the Technical Merit evaluation. Corporate contribution may be in the form of direct labor, travel, consumables, hardware/software development, launch transportation, or other in-kind contributions. Also, other reasonable forms of corporate contribution including travel directly related to achieving proposed objectives, investments in special facilities or equipment, tooling or other prior private investment, and internally funded technology maturation such as Independent Research and Development (IRAD), are deemed acceptable for this effort. State and local government contributions may be included with private corporate resources.

The value of participation by federally funded participants and/or the non-reimbursable use of federal government facilities shall be added to the Government Resources estimate within the Offeror's *Attachment 7: Corporate Contribution Worksheet*. Criteria and procedures for the allowability and allocability of cash and non-cash contributions shall be governed by [FAR](#) Parts 30 and 31, and [NFS](#) Parts 1830 and 1831.

#### **4.0 Proposal Submission Information**

##### **4.1 Instructions for Proposals**

See [NextSTEP-2 Omnibus BAA](#) for general instructions. The specific instructions in this section are in addition to or supersede the general instructions in the NextSTEP-2 Omnibus BAA and apply to this Appendix only.

Failure to submit a complete electronic proposal by the due date and time specified for this Appendix shall result in the proposal being considered late, and shall be handled in accordance with FAR 15.208(b).

All Offerors shall follow FBO.gov usage requirements as defined in the Vendor User Guide posted on the home page of FBO.gov. The Government is not responsible for any failure attributable to the transmission or receipt of documents submitted using electronic means, including the missing of any established deadlines. It is the Offeror's responsibility to submit correct proposal package(s) and to verify correct submission by using the instructions provided in Federal Business Opportunities Vendor User Guide. Although FBO.gov sends an email upon submission, the email receipt from FBO.gov shall not constitute record of proper bid submission. It is the Offeror's responsibility to confirm the Government's receipt of transmitted information matches the information submitted by the Offeror per the instructions in the FBO Vendor User Guide.

Offerors are advised that, as stated in the FBO Vendor User Guide, file sizes over 100MB may experience system difficulties. All the proposal files may be compressed (zipped) into one file titled "NNH16ZCQ001K\_CDISS\_VENDORNAME.zip" or uploaded individually. The electronic proposal shall contain all information required by the solicitation to be determined responsive. Files shall not have password protection, encryption, or any access or viewing restrictions.

#### 4.1.1 Proposal Format and Contents

The proposal format and content requirements as outlined in this section below are specific to this Appendix. Electronic copies of the proposal shall be prepared and submitted in Microsoft Office® applications (Word and Excel). Further, the Microsoft Excel spreadsheets shall be submitted in Microsoft Excel format, not in a scanned Microsoft Word or Adobe PDF file. Microsoft Word documents shall be submitted in Microsoft Word format, not in an Adobe PDF file. For electronic submissions, each volume of the proposal shall be submitted as a separate electronic file. The Offeror shall not embed or provide external links for sound or video files into the proposal files. Minimize the use of scanned images and keep embedded graphics as simple as possible.

All pages in each section shall be numbered sequentially with Arabic numerals (1, 2, 3, etc.) for contents subject to page limitations. A page is defined as one side of an 8 ½" x 11" sheet of paper, with at least one-inch margins on all sides, using Times New Roman and not smaller than 12-point font size, with the exception of tables, schedules, and figures, which may use 8-point font size. Pages in excess of the page limits specified in *Table 2: Overview of Proposal Sections and Page Limitations* for each section will not be evaluated. Minor informalities or irregularities in a proposal that can be adjusted, corrected, or waived without being prejudicial to other Offerors may be accepted if it is immaterial to the Appendix. Pages contained in a page limited sections of the proposal which do not comply with the Proposal Format and Contents requirements may be returned by the Government and not evaluated.

The page count limits are described in *Table 2: Overview of Proposal Sections and Page Limitations*. Other Volumes and attachments as described in *Table 2: Overview of Proposal Sections and Page Limitations* will not be included in the page count. Sections of the proposal that are not page limited do not need to abide by the font, size or margin requirements of the page limited sections, although it is the Offeror's responsibility to ensure readability.

There is no file size limit for proposals (This is an exception to Section 2.3.1(c) of the [NASA Guidebook for Respondents](#)). Only attachments that are specifically requested either in this solicitation or in appendices to this solicitation should be submitted.

*Table 2. Overview of Proposal Sections and Page Limitations*

Volume No.	Section No.	Title	Page Limits
		Title Page	1
1		Executive Summary	5
2		LEO Commercialization Approach	
	1	Proof of Eligibility	3
	2	Technical Approach	35
	3	Business Approach	25
3		Price	No Limit
Attachments	1	Statement of Work	No Limit
	2	Model Contract	No Limit
	3	Task Orders 1 and 2 Proposal	25
	4	DRL and DRDs	No Limit
	5	Requested Government Furnished Equipment/Services and Letters of Intent (LOIs)	No Limit
	6	Resumes of Key Personnel	2 pages per Resume
	7	Corporate Contribution Worksheet	No Limit
	8	Business Case Analysis Worksheet	No Limit
	9	DRD-001, Commercialization Roadmap	20
	10	DRD-002, Integrated Master Schedule	5
	11	DRD-003, Concept of Operations	20
	12	DRD-005, Organizational Conflict of Interest (OCI) Plan	10
	13	DRD-006, Small Business Subcontracting Plan and Reports	10
	14	DRD-007, Mishap Preparedness & Contingency Plan	10
	15	DRD-008, Safety & Health Plan	20
	16	DRD-009, Insight Management Plan	20

Note: Initial submission DRD page limitations are for proposal purposes only

#### 4.1.1.1 Title Page

- Include any Notice of Restriction on Use and Disclosure of Proposal Information.
- An optional graphic image may be included.
- The Offeror's name for the proposal or proposed project.
- Date of the proposal.
- The title, solicitation number and Appendix being responded to of this Announcement.
- Entity name and address.
- Offeror point of contact name, title, e-mail address, and phone number.

#### **4.1.1.2 Executive Summary**

Proposals shall include an executive summary describing the prominent and distinguishing features of Volume 2 of the proposal that demonstrate the Offeror's plans and ability to meet the goals and objectives in Section 1.3: Objectives of Appendix I.

The executive summary shall include the name and Data Universal Numbering System (DUNS) number of the Offeror, subcontractors, and other team members. The executive summary should stand alone and not directly reference other sections of the proposal. The executive summary submitted with the proposal may include proprietary data as it will not be publically released. A publically releasable version of the executive summary will be required following contract award as detailed in the **BAA Attachment A – Statement of Work**.

#### **4.1.1.3 Proof of Eligibility**

The proposal shall provide information showing that the Offeror and all team members are eligible participants as stipulated in [NextSTEP-2 Omnibus BAA](#), Section 3: Eligibility Information and Section 3.1: Eligibility of Applicants of this Appendix.

Describe compliance with participation requirements as needed.

#### **4.1.2 Proposal Content by Section**

Each proposal shall include the following content as described below.

##### **4.1.2.1 Technical Approach**

The technical approach shall address each of the content requirements below and provide sufficient information and rationale for the Government to evaluate the credibility, reasonableness, and risk of the Technical Approach and consistency with the Offeror's proposed Business Approach, Statement of Work (SOW), and the Task Orders. The Offeror's proposal shall include a description of significant risks and mitigation plans; and describe its approach to meeting NASA's insight needs as defined in the NASA-provided Model Contract.

##### **Technical Concept and Evolution**

The Offeror shall describe their first Commercial Element, Commercial Segment, and Commercial Destination concept, architecture, capabilities, features, system specifications, performance specifications, and concept of operations. The Offeror shall place significant emphasis on the first Commercial Element if more than one.

The Offeror shall provide a high-level schedule, including earliest realistic launch date for the first Commercial Element, launch date of any additional Commercial Elements (if applicable) integration into the Commercial Segment, and date for evolution to a self-sustaining Commercial Destination. The schedule should identify the duration the Commercial Segment is to be attached to the ISS with a timeline detailing when risk reduction and market demonstration activities are anticipated to be achieved, and the point when the Commercial Segment is commercially viable.



(a) *Commercial Segment*

If the Commercial Segment will consist of more than one Commercial Element, the Offeror shall describe the assembly sequence for constructing the Commercial Segment including iterative Commercial Segment configurations and docking/berthing capability; schedules; technology maturation; and proposed uses of Government resources, services, and assets.

For each Commercial Element, the Offeror shall provide the initial mass properties, dimensions, and figure(s) showing the configuration for capture, berthing and nominal operations at ISS. For major systems (including, but not limited to: Guidance Navigation & Control (GN&C), Power, Life Support, Command & Data Handling (C&DH), Communications, Thermal), the Offeror shall describe performance capabilities, Technology Readiness Levels, and interfaces to ISS, as applicable. An overview of “NASA Technology Readiness Levels” can be found in the Technical Library (see Section 7.0: Technical Library Access).

The Offeror shall identify the NASA services, resources and assets (both ground and on-orbit) requested to support development, launch, activation, and operations of the Commercial Segment in *Attachment 5: Requested Government Property/Services* of the proposal. The Offeror shall provide an overview of the proposed NASA services, resources, and assets to be used as well as the rationale for use and how the use reduces risk to the approach. The ICEPAH, located in the Technical Library (see Section 7.0: Technical Library Access), provides a reference of the on-orbit ISS capabilities and services NASA may be able to provide to Offerors.

The Offeror shall describe their approach, schedule, dependency on ISS systems, or NASA Government Furnished Equipment (GFE) for support of crew habitability including life support, waste management, hygiene, crew quarters, and exercise equipment, with special emphasis on Environmental Control and Life Support Systems (ECLSS).

For the first Commercial Element berthing to the ISS Node 2 Forward port, the Offeror shall describe the planned launch vehicle and spacecraft bus configuration for Commercial Element delivery to the ISS, including the disposition of the spacecraft bus after the Commercial Element is berthed to ISS (if applicable).

(b) *Commercial Destination*

The Offeror shall provide an overview of the long-term configuration, end-to-end schedule, and approach for evolving from a Commercial Segment attached to ISS to a self-sustaining Commercial Destination in LEO. The overview shall include their approach for transitioning from use of Government resources and services (e.g. ISS ground/flight support) to autonomous commercial resources and services. It shall also include an approach and timeline for assuming responsibility for traditionally Government-led processes, such as operations and safety.

The Offeror shall describe their approach if utilizing existing ground and ISS on-orbit assets upon transition to the Commercial Destination operations and mitigations if assets cannot be

utilized as planned. The “Removal of ISS Elements Feasibility Assessment Overview” and “ISS Background Information” presentations, located in the Technical Library, provide information on the feasibility and technical impact associated with various scenarios of repurposing ISS capabilities and modules.

### **Development, Certification, and Demonstration Approach**

The Offeror shall provide their approach for Design, Development, Test, and Evaluation (DDT&E) of the Commercial Segment. The approach should include an overview of technical risks and associated mitigations (system design, hardware lifecycle management, etc.), project and program risk management, approach for industry design and development standards, software development and lifecycle plans, and meeting the Integration Milestones as defined in **BAA Attachment A – Statement of Work**.

The Offeror shall describe their approach to certification of the Commercial Element and Commercial Segment ISS interfaces by meeting applicable integration requirements documented in draft “SSP 51074 Commercial Element Requirements Document – Draft” (CERD), located in the Technical Library (see Section 7.0: Technical Library Access). The Offeror shall identify any CERD requirements that may not be met or are determined to require further discussion with NASA, with supporting rationale. Note that NASA will retain approval authority for Commercial Segment certification of ISS interface requirements.

For the first Commercial Element berthing to the ISS Node 2 Forward port, the Offeror shall provide:

- (a) A detailed schedule including major milestones and critical path activities
- (b) Their approach for use of in-house and major supplier expertise for hardware design, external teaming arrangements, engineering services, and Commercial Segment integration.
- (c) Their test and verification approach that leads to Offeror’s certification of both the first Commercial Element and spacecraft bus. This approach should include both Commercial Element-specific and ISS interface requirements.

As applicable, the Offeror shall describe their approach for the development of segment-wide system specifications, functional allocation of resources across the Commercial Segment, and test and verification approach for ensuring multiple Commercial Elements will operate as intended when installed on-orbit.

Significant emphasis should be placed on describing the DDT&E approach of the Commercial Segment through achievement of self-sustained habitable systems (life support, exercise, hygiene, sleeping accommodation, etc.).

### **Sustaining and Operations of Commercial Segment**

The Offeror shall describe the approach to sustaining engineering and operations of Commercial Segment attached to ISS, ground rules and assumptions for use, operational interfaces to NASA

and/or the ISS National Lab for flight planning and sequencing, real-time operations interfaces and teaming approach. The approach should include the following subjects:

- (a) A high-level operations concept, including initial element delivery, activation and checkout, outfitting, nominal crewed and uncrewed (quiescent) operations, recurring maintenance, and Extra-Vehicular Activity (EVA) and robotics (if proposed).
- (b) Approach to teaming with other organizations (e.g. for-profit corporations, non-profit organizations, international organizations).
- (c) Forecast and implementation approach for annual upmass, downmass, and Commercial Segment crew rotations, consumables management, including use of NASA resources such as ISS stowage, docking/berthing ports, and NASA crew time (if proposed).
- (d) Commercial Segment sustaining approach including reliability and maintainability, logistics and maintenance, sustaining engineering, hardware sparing, vendor retention plans and ground testbeds.
- (e) Approach for Commercial Segment crew selection, health and medical screening, certification, and medical monitoring (pre-flight and in-flight);
- (f) Approach and planned facilities to support training of Commercial Segment crew, ground teams, and NASA crew (as required).
- (g) Approach to mission operations capabilities including Commercial Segment Control Center operations and supporting ground/space network.

## **Safety and Mission Assurance**

### *(a) Safety and Mission Assurance Process*

The Offeror shall describe their proposed approach for the Safety and Mission Assurance (S&MA) process from the launch of the initial Commercial Element through the transition to a Commercial Destination, including the items listed below. ISS Integrated Safety will remain a NASA Safety Review Panel-led process.

- (1) Assurance of crewmember safety and survivability such as providing medical support, safe-haven and emergency egress capability. Include all phases of the S&MA process (e.g., test operations, range, ground, and flight) incorporating safety, reliability, maintainability, quality, and software assurance.
- (2) Government (e.g., NASA Procedural Requirement (NPR) 8715.3, Space Station Program (SSP) 30599) or industry safety process standards to be followed, including hazard analysis and control (e.g., SSP 30309), and approach for incorporation into the Offeror's safety process.
- (3) Requested delegation of traditionally NASA-led processes such as Commercial Segment level safety and/or payload safety
- (4) Interactions between the safety function, engineering function, and project management.
- (5) Technical and programmatic risks associated with the proposed effort with particular attention to ensuring safety of crewmembers and the public.

(b) *Safety and Mission Assurance Requirements*

The Offeror shall identify the S&MA technical requirements to be applied to all mission phases from the initial Commercial Element through the Commercial Destination, including the following:

- (1) System Safety meeting the Section 3.3.11 of the CERD. Identify hazard classifications and applicable levels of failure tolerance required.
- (2) Payload Safety incorporating a Government (e.g., SSP 51721) or comparable industry standard. Identify hazard classifications and subsequent levels of failure tolerance required.
- (3) Quality Assurance incorporating an appropriate Government (e.g., SSP 41173) or industry (e.g., SAE AS9100) standard. Discuss approach for providing independent oversight of safety critical processes by a certified government or industry agency.

**Technical Risk Management Strategy and External Dependencies**

The Offeror shall describe the technical, schedule, and safety-related risks and include the risk level (low, medium, or high) along with a strategy to mitigate each risk. The Offeror shall specifically identify any aspects of their mission strategy that poses a risk to the ISS.

The Offeror shall describe their external dependencies, including U.S. and foreign provider dependencies. The Offeror shall specifically identify any aspects of their mission strategy that are dependent on or can be significantly affected by external factors or dependencies.

The Offeror shall describe their technical approach for ensuring continuous capability to safe the Commercial Segment and detach from ISS in the event of business or technical failure.

**4.1.2.2 Business Approach**

This section shall address each of the content requirements below and provide sufficient information, rationale and any available substantiation for the government to establish the credibility, reasonableness, and risk that the proposed business approach will successfully develop and demonstrate commercial capabilities that enable execution of commercial activities, leading to a sustainable Commercial Destination in LEO. Within this section, the proposal shall describe the approach to commercialization while operating at ISS and for the long-term Commercial Destination after departure from ISS, consistent with the proposed Technical Approach, Statement of Work, Commercialization Roadmap (DRD-001), and Task Orders 1 and 2.

The Offeror shall define the anticipated dates when individual revenue streams and the Commercial Segment as a whole becomes commercially viable and the recommended dates for initiating and completing transition to a self-sustaining Commercial Destination. The Offeror shall provide a cash flow summary showing the expected break-even point and the level of profitability at the recommended transition point from ISS to a Commercial Destination in LEO.

## Governance Structure & Management Strategy

The Offeror shall describe the organizational structure, roles and responsibilities, biographical information, and governance model including the top-level management team, Board of Directors, and any other advisory boards that impact the decision-making process. The proposal shall provide resumes of key management and technical personnel in *Attachment 6: Resumes of Key Personnel*, which emphasize previous experience designing, developing and/or operating space-qualified systems, business development, and commercial business operations expertise related to the commercial activities applicable to the objectives of this Appendix I.

The Offeror shall describe their approach to acquiring the personnel and facilities necessary to implement their Technical and Business approaches. The Offeror shall describe teaming arrangements, as applicable. If applicable, Offerors shall include a Small Business Subcontracting Plan that addresses the requirements of FAR 19.704 as part of *Attachment 13: DRD-006, Small Business Subcontracting Plan and Reports* to the proposal.

The Offeror shall describe their approach to acquiring necessary permits, licenses, titles, approvals, or other regulatory authorizations, as applicable (for example, launch licenses, export control licenses or Technical Assistance Agreements).

The Offeror shall describe their approach to interacting with the operator of the ISS National Lab.

The Offeror shall describe their insight management approach to interacting with NASA through the contract to ensure an effective technical interchange between NASA and the Offeror throughout the ISS integration and operation phases.

## Commercialization Strategy

- (a) Commercial Offering – The Offeror shall describe the portfolio of products and services to be offered and how these will be differentiated from earth-based, sub-orbital and orbital alternatives. The Offeror shall describe the state of readiness for the underlying technology and plans to mature/demonstrate those products and services. The Offeror shall describe the estimated quantities and pricing of products and services, including key assumptions. The Offeror may include products and services targeting NASA’s long-term needs in LEO (reference Section 1.5: NASA’s Long Term Goals and Objectives) based on their contribution to the Offeror’s business case and long-term viability. The Offeror’s portfolio of products and services should focus on services that support long-term viability in the commercial market rather than focus specifically on NASA’s needs. The offering must be consistent with the “NASA Interim Directive (NID) on Use of International Space Station (ISS) for Commercial and Marketing Activities” found at <https://www.nasa.gov/leo-economy/commercial-use-policy> which includes a description of allowable commercial activities to be conducted on ISS and restrictions on NASA/U.S. Government astronaut support of those activities.

- (b) Market – The Offeror shall define and describe the market(s) to which it will provide products and services, including size, anticipated growth rate, target customers, domestic and foreign. The Offeror shall provide a market revenue forecast and key assumptions for all proposed products and services over a 15 year period, including total addressable market and expected revenue capture for both Government and commercial markets. The proposal shall specify anticipated NASA and non-NASA revenues. The Offeror shall include this revenue data in *Attachment 8: Business Case Analysis Worksheet* of the proposal.
- (c) Business Development – The Offeror shall describe the core aspects of its business development strategy, including the plan for marketing and selling products and services, and key assumptions that enable customer acquisition and stimulation of non-NASA demand.

### Financial Strategy

- (a) Funding Required – The Offeror shall provide a bottoms up cost estimate of the various DDT&E activities (by work elements for first Commercial Element only) including non-recurring and recurring engineering, consistent with the approach outlined in the Technical Approach and Statement of Work. The Offeror shall describe the estimated full life-cycle cost to develop, launch, operate and sustain the Commercial Segment at ISS and the Commercial Destination over a minimum of 15 years. The proposal shall describe key assumptions and a basis for the cost estimate, including a breakout of the costs of goods sold and transportation costs for elements, crew and cargo. It is NASA's intent that the Offeror is responsible for transportation costs. The Offeror shall include this cost data in *Attachment 8: Business Case Analysis Worksheet* of the proposal.
- (b) Funding Sources – The Offeror shall describe the approach and timing for securing the required funds and the target Return on Investment (ROI) or Internal Rate of Return (IRR) to meet investor payback requirements, as well as the exit strategy for major investors. The Offeror shall describe in the *Attachment 9: DRD-001, Commercialization Roadmap* the proposed schedule of performance milestones, including payment amounts, objective success criteria, rationale, and planned achievement dates. The Offeror shall specify the funding requested of the Government in the Pricing Proposal and in the response to **BAA Attachment B – Model Contract** and **BAA Attachment C – Request for Task Order Proposal (RFTOP) for Task Order 1 and Task Order 2** as specified in Section 4.2.1: Attachment A, B, C, and D Instructions. Specify the Government funding requested through the completion of CLIN 3, beyond that requested for Task Orders 1 and 2, and include this data in *Attachment 8: Business Case Analysis Worksheet*.

### Business Risk Management Strategy and External Dependencies

The Offeror shall describe risks associated with the Business Approach and include the risk level (low, medium, or high) along with a strategy to mitigate each risk. The Offeror shall describe contingency plans for markets that do not develop as expected and any external business

dependencies, including U.S. and foreign provider dependencies. This section shall also describe any relevant macroeconomic factors (such as NASA's policy on Use of ISS for Commercial and Marketing Activities, potential competition, etc.).

The Offeror shall describe their business approach for financing the technical approach for ensuring the continuous capability to save the Commercial Segment and detach from ISS in the event of business or technical failure.

#### 4.1.2.3 Organizational Conflict of Interest

In accordance with FAR Part 9.5, Organizational Conflicts of Interest, the Offeror and the Offeror's proposal will be reviewed for existing and potential Organizational Conflict of Interest (OCI) issues in relation to this announcement. Data delivered in the performance of the contract relating to integration of the Commercial Segment with ISS may be provided to ISS support contractors to ensure safety and successful interface compatibility with ISS. The Offeror shall identify existing OCI issues, if any, and submit a plan to mitigate each issue as part of *Attachment 12: DRD-005, Organizational Conflict of Interest (OCI) Plan* of the Offeror's proposal.

#### 4.1.2.4 Price Proposal

NASA has waived the requirement for certified cost or pricing data per FAR 15.403-1(c)(4). The Price Proposal shall include the completed template provided as **BAA Attachment H – Pricing Template** to this Appendix. The Offeror's price proposal shall:

- (1) Provide traceability to the Technical and Business Approaches.
- (2) Provide a basis of estimate that explains all pricing and estimating techniques. The basis of estimate for each milestone in the Pricing Template shall include supporting rationale for all deliverables proposed to accomplish the SOW for the CLIN and completion criteria. Additionally, Offerors shall provide payment amounts, milestone completion dates and completion criteria for CLINs 1 through 3 in the Pricing Template in accordance with their proposed Technical and Business Approach. Offerors can alter columns in the Pricing Template to accommodate their proposed milestone amounts. The price to NASA reflected in Row 9 of the Pricing Template shall be consistent and traceable to Row 30 of the Revenue Section within the *Attachment 8: Business Case Analysis Worksheet* required under the Technical Factor. Offerors shall propose a Pricing Template for each Commercial Element as appropriate to accommodate their Technical and Business Approach.
- (3) The Offeror's price proposal shall be submitted in one volume labeled Volume 3 Price Proposal.

#### 4.1.2.5 Proposal Attachments

Along with the proposal, the Offeror shall provide the following attachments:

- Attachment 1: Statement of Work
- Attachment 2: Model Contract

- Attachment 3: Task Order 1 and 2 Proposal
- Attachment 4: DRL and DRDs
- Attachment 5: Requested Government Property/Services and any associated letters of intent
- Attachment 6: Resumes for key personnel
- Attachment 7: Completed Corporate Contribution Worksheet
- Attachment 8: Completed Business Case Analysis Worksheet
- Attachment 9: DRD-001, Commercialization Roadmap
- Attachment 10: DRD-002, Integrated Master Schedule
- Attachment 11: DRD-003, Concept of Operations
- Attachment 12: DRD-005, Organizational Conflict of Interest (OCI) Plan
- Attachment 13: DRD-006, Small Business Subcontracting Plan and Reports
- Attachment 14: DRD-007, Mishap Preparedness & Contingency Plan
- Attachment 15: DRD-008, Safety & Health Plan
- Attachment 16: DRD-009, Insight Management Plan

## 4.2 Additional Proposal Guidance

### 4.2.1 Attachment A, B, C, and D Instructions

The Model Contract, Statement of Work, RFTOP and DRL and DRDs are provided as **BAA Attachment B – Model Contract, BAA Attachment A – Statement of Work, BAA Attachment C – Request for Task Order Proposal (RFTOP) for Task Order 1 and Task Order 2, and BAA Attachment D: Data Requirements List (DRL) and Data Requirement Description (DRDs)**. The Offeror may propose minor exceptions or specific modifications to the Model Contract, Statement of Work, and DRL and DRDs based on their Technical and Business Approach. These exceptions or changes shall be clearly identified and described, with supporting rationale, and with revision tracking turned ON.

A model contract is provided as **BAA Attachment B – Model Contract**. The model contract contains specific terms and conditions applicable to this Appendix. The Offeror shall submit this entire model contract with their proposal as *Attachment 2: Model Contract* with all required Offeror fill-ins (OFI) completed, clearly indicating proposed modifications and exceptions along with rationale and revision tracking turned ON. Sections designated with the text [TBD] stand for “To Be Determined.” The Offeror shall not fill in the [TBD]s. The Government will update these after contract award. Offerors are cautioned that any material exceptions to the model contract terms and conditions may result in the Offeror’s proposal being deemed unacceptable.

A SOW is provided as **BAA Attachment A – Statement of Work**, which contains NASA’s minimum mandatory requirements for all defined CLINs and Integration Milestones. The Offeror shall submit this Statement of Work with their proposal as *Attachment 1: Statement of Work*, clearly indicating proposed modifications and exceptions to the NASA-provided SOW along with rationale and revision tracking turned “on.”



A RFTOP for TO1 and TO2 is provided as **BAA Attachment C – Request for Task Order Proposal (RFTOP) for Task Order 1 and Task Order 2**. The Offeror shall submit their firm-fixed-price IDIQ Task Order 1 and 2 Proposal as *Attachment 3 – Task Orders 1 and 2 Proposal* as detailed in **BAA Attachment C – Request for Task Order Proposal (RFTOP) for Task Order 1 and Task Order 2**. The Task Orders shall be Firm Fixed Price. The Government reserves the right to award these IDIQ Task Orders at contract award.

A list of data requirements and descriptions is provided as **BAA Attachment D: Data Requirements List (DRL) and Data Requirement Description (DRDs)**. The Offeror shall submit the DRL and DRDs with their proposal as *Attachment 4: DRL and DRDs*, clearly indicating proposed modifications and exceptions to the NASA-provided DRL and DRDs along with rationale and revision tracking turned “on.”

#### **4.2.2 Use of Government Resources**

##### **4.2.2.1 Government Furnished Property and Services**

The Offeror shall obtain necessary property and services from a commercial source when available. The Offeror may propose use of Government Furnished Property (GFP) or Government Furnished Services (GFS), both on-orbit and ground, as part of their proposal. The Offeror shall complete **BAA Attachment F - Requested Government Property/Services Form** for all proposed GFP/GFS and submit as *Attachment 5: Requested Government Property/Services* to the proposal. Any requested Government Property/Services will be assessed and may be provided on as-available, non-interference basis with other NASA priorities and are not guaranteed. In accordance with Section 5.0 of the “NASA Interim Directive (NID): Use of the International Space Station (ISS) for Commercial and Marketing Activities,” the Offeror must reach agreement with NASA on the reimbursement of NASA costs for use of any Government property or services that directly support the Offeror’s commercial activities following the completion of a related commercial capability demonstration objective, except where the end user is a NASA or National Lab sponsored research and technology development demonstration.

The Offeror may propose that NASA provide property and services from the following categories:

**ISS Standard Services:** Certain basic ISS property and services will be made available for the integration and demonstration of the Commercial Segment. These are described in the ICEPAH provided in the Technical Library (see Section 7.0: Technical Library Access) and include assets such as power and thermal support available on ISS, some limited equipment and NASA crew time, and Subject Matter Expertise for review of integration milestone deliverables.

**ISS Non-Standard Services:** The Offeror may request other ISS property and services, including equipment, beyond those included in the ICEPAH to enable Commercial Segment development and operations. Due to limitations associated with certain in-flight resources, NASA is unable to support requests for significant use of NASA crew time, life support systems (including the toilet), exercise equipment, EVA, return downmass and on-orbit stowage.

The Offeror may propose use of Government property including selected NASA flight hardware and equipment as described in the ICEPAH. These requests will be addressed on a case-by-case basis depending on the intended use. Should such requests be approved, these items will be provided in “as-is” condition.

The Offeror may propose to purchase and take title to surplus government property to be consumed in their technical approach through a directed “negotiated sale” administered by the Government Services Administration under the authority in NPR 4300.1C, Section 5.4. In this scenario, the Offeror shall define a fair market value for the asset as part of their Business Approach in accordance with NPR 9090.1 Appendix E.

#### **4.2.2.2 Requests for Government Support**

While the majority of work to be completed is anticipated to be performed by the contractor at the contractor or subcontractor facilities, the Offeror may propose the use of NASA facilities, property, and/or workforce to support specialized analysis or services that may be useful for this Appendix. NASA facilities and property include facilities and property at the NASA Centers and/or at the Jet Propulsion Laboratory (JPL). Workforce is defined as the personnel necessary to support the specialized request from the NASA Center, including supporting contractors, or JPL. Such requests do not apply to the NASA workforce associated with the management and insight of the contract and are not to be utilized for the provision of any spacecraft ground or flight hardware or software.

The Offeror is encouraged to provide a detailed Request for Support (RFS) to the appropriate Government Point of Contact (POC) to obtain a Letter of Intent (LOI) from the Government noting the availability of the requested support and a Rough Order of Magnitude (ROM) cost estimates. The Offeror must submit an RFS for any proposed support within 14 calendar days of release of this Appendix as described in **BAA Attachment I –Request for Government Support Instructions**. The Government POC will coordinate with the NASA performing organization to prepare and deliver the LOI to the Offeror. NASA’s intention to provide the requested support is non-binding, non-exclusive and is contingent on the Offeror’s proposal being selected, relevant Task Order authorization, and the availability of the requested resources. The Government may refuse any Offeror’s RFS for any reason, and will determine the appropriate implementation strategy and mechanism. The provision of any requested support shall be subject to a determination by the Government that any potential organizational conflicts of interest can be effectively avoided, negated, and/or adequately mitigated. If an Organizational Conflict of Interest (OCI) exists or the Government determines one exists, a mitigation approach must be provided to the Contracting Officer for determination and acceptance prior to implementing the request.

The Offeror shall provide a summary of all RFSs and LOIs for ground services using the template in **BAA Attachment F - Requested Government Property/Services Form** and submit as part of *Attachment 5: Requested Government Property/Services* of the proposal. The estimated cost of the requested Government support shall be appropriately reflected as part of the full life-cycle costs in *Attachment 8: Business Case Analysis Worksheet* of the Offeror’s

proposal. If the Offeror does not submit an RFS for proposed Government support, the Offeror shall provide its basis of estimate for the estimated cost in *Attachment 8: Business Case Analysis Worksheet*.

#### **4.2.3 Access to Research Results/Data Management Plan**

Respondents will not be required to provide a Data Management Plan with proposals for this Appendix.

### **5.0 Proposal Review Information**

NASA will evaluate the entire proposal including attachments in accordance with the process as defined in the NextSTEP-2 Omnibus BAA, Section 5: Proposal Review Information and as defined in this Appendix below.

#### **5.1 Compliance Review**

NASA will perform a compliance review specifically defined in this Appendix.

NASA will prescreen all proposals including attachments for compliance with requirements of this solicitation. This includes submission of a complete proposal with all required elements:

- Submission of a proposal with an Executive Summary that meets the requirements in Section 4.1.1.2: Executive Summary. If, after reading the executive summary, it is determined that the proposal fails to meet the goals and objectives as outlined in Section 1.3: Objectives of Appendix I, it shall be deemed non-compliant and will be withdrawn from the review process
- Submission of a proposal from an eligible applicant as specified in the Eligibility Information and Other Considerations in this Appendix and in the NextSTEP-2 Omnibus BAA Eligibility Information
- Submission of a proposal that is consistent with the page limitations and formatting guidelines specified in this Appendix
- Submission of the proposal by the due date
- Proposal was submitted with all applicable attachments, including the Statement of Work, Model Contract, Task Order 1 and 2 Proposal, DRL and DRDs clearly indicating proposed modifications and exceptions along with rationale and revision tracking turned ON as described in Section 4.2.1: Attachment A, B, C, and D Instructions

NASA reserves the right to conduct due diligence exchanges with Offerors regarding compliance with the eligibility criteria. Non-compliant proposals will be withdrawn from the review process and declined without further review. Compliant proposals submitted in response to this BAA will undergo full evaluation.

#### **5.2 Evaluation**

NASA will evaluate each proposal and associated attachments as defined in the NextSTEP-2 Omnibus BAA, Section 5: Proposal Review Information and as defined below in this Appendix. The Evaluation Panel will summarize the strengths and weaknesses of each proposal including

attachments. The Evaluation Panel will evaluate each Factor using the following adjectival ratings: Excellent, Very Good, Good, Fair, or Poor.

### **5.3 Selection Official**

The Johnson Space Center (JSC) Center Director will make selections.

### **5.4 Personnel**

See NextSTEP-2 Omnibus BAA Section 5.4: Personnel.

### **5.5 Evaluation Criteria**

The evaluation factors are defined below. Factor 2 (Technical Merit) is the most important. Factor 1 (Relevance) is more important than Factor 3 (Price).

#### **5.5.1 Factor 1 – Relevance**

NASA will evaluate the proposal's potential contribution to NASA's mission and the objectives stated in Section 1.3: Objectives of Appendix I.

#### **5.5.2 Factor 2 – Technical Merit**

NASA will evaluate the proposed Technical and Business Approaches as described in Volume 2 and all attachments for credibility, reasonableness, and risk. NASA will evaluate the Offeror's capability, including but not limited to corporate resources, facilities, and the qualifications of key personnel, demonstrated by the proposal that would affect the likelihood of achieving the proposed approaches.

#### **5.5.3 Factor 3 – Price**

A price analysis will be performed in accordance with FAR 15.404-1 (b) using the evaluated price. The evaluated price will consist of the sum of the total price for proposed CLINs 1-3. The evaluated price will be assessed for reasonableness and used for selection purposes.

### **5.6 Price Review and Programmatic Relevance/Balance**

A review of Price and Programmatic Relevance/Balance will be conducted per NextSTEP-2 Omnibus Section 5.6 and as stated below.

The Selection Official will select proposals considering the evaluation criteria, the objectives of the Appendix, programmatic considerations including assessed risk to the Government of proposed model contract tailoring, and the available financial resources.

### **6.0 Award Information**

#### **6.1 Funding Availability**

NASA reserves the right to select for award multiple, one, or none of the proposals in response to this Appendix. NASA intends to evaluate and select for award based on initial proposals without discussions. After selection, NASA will enter into negotiations with selected Offerors

to finalize the pricing and the terms and conditions of the contract. The overall number of awards will be dependent upon funding availability and evaluation results.

The amount of funding allocated to an Offeror who is selected for award will be solely at NASA's discretion, as specified in specific task order awards. The specific amount of the milestone payments will be proposed by the Offeror in each task order.

Offerors are expected to secure any additional funding necessary to complete the proposed activity within this contract. NASA may be considered as one of the sources of funds in the Offeror's financing plan, but shall not be the only source of funding. The contract and all subsequent task orders will be fixed price, which will not be increased based on the Offeror's ability or inability to obtain private funding.

## **6.2 Funding Allocation**

The Government has reserved the right to award multiple contracts under this Appendix. The maximum not-to-exceed ordering value of all contracts to be awarded under the anticipated Commercial Destination Development effort is \$561 Million, collectively and individually across all awarded contracts for awards from both Appendix I and Appendix K (direct-to-free-flyer habitable Commercial Destination). Actual not-to-exceed ordering value of each individual contract will be determined based on the number of Offerors selected and the contract specifics that are negotiated post-selection.

## **6.3 Period of Performance**

Offerors shall propose a contract period of performance (i.e., Ordering Period) for this effort consistent with its proposed Technical and Business Approach. The Government anticipates that the contract Ordering Period will begin in 2019.

## **6.4 Award Date**

Award is anticipated in the second half of calendar year 2019.

## **7.0 Technical Library Access**

Instructions on obtaining access to a Technical Library containing requirement and reference documents necessary for this Appendix are provided below. A maximum of two parties from each Offeror may have access to the Technical Library. A listing of the Technical Library contents, including the Applicable and Reference Documents, can be found in **BAA Attachment E: Technical Library Contents**.

There are two methods to gain access:

- Those that currently have a NASA Domain Consolidation (NDC) Username have already been cleared for Export Control access and may apply for BAA Technical Library Access by sending an e-mail to [NextSTEP-BAA-CDISS@mail.nasa.gov](mailto:NextSTEP-BAA-CDISS@mail.nasa.gov). Be sure to include your NDC Username on the email.

Once access is granted, the Technical Library website can be accessed via the link below:  
<https://iss.sp.jsc.nasa.gov/Int/Projects/LEOComm/CDISS-Tech-Library>

- Those that do not have a NDC Username have not been cleared for Export Control access and shall apply for BAA Technical Library Access by sending an e-mail to [NextSTEP-BAA-CDISS@mail.nasa.gov](mailto:NextSTEP-BAA-CDISS@mail.nasa.gov) with the following information:  
 Name, Company Name, Citizenship, Contact Phone Number, Contact e-mail address, Contact Address and any government clearance information to help with clearing the applicant.

NASA will work to clear the submitted individuals and provide the Technical Library contents via NASA's NOMAD Large File Transfer service (<https://transfer.ndc.nasa.gov>). The due date for submission of proposals will not be extended for any Offeror based on additional time necessary for obtaining access.

## 8.0 Attachments

- Attachment A: Statement of Work
- Attachment B: Model Contract
- Attachment C: Request for Task Order Proposal (RFTOP) for Task Order 1 and Task Order 2
- Attachment D: Data Requirements List (DRL) and Data Requirement Description (DRDs)
- Attachment E: Technical Library Contents
- Attachment F: Requested Government Property/Services Form
- Attachment G: Business Case Analysis Template
- Attachment H: Pricing Template
- Attachment I: Request for Government Support Instructions
- Attachment J: Corporate Contribution Worksheet

## 9.0 List of Acronyms

ACO	Activation and Checkout
BAA	Broad Agency Announcement
C&DH	Command and Data Handling
CASIS	Center for the Advancement of Science in Space
CD	Commercial Destination
CDR	Critical Design Review
CDISS	Commercial Destination – International Space Station
CE	Commercial Element
CERD	Commercial Element Requirements Document
C.F.R.	Code of Federal Regulations
CLIN	Contract Line Item Number
CS	Commercial Segment

DDT&E	Design, Development, Test & Evaluation
DRD	Data Requirement Description
DRL	Data Requirements List
DUNS	Data Universal Numbering System
ECLSS	Environmental Control and Life Support System
EVA	Extra-Vehicular Activity
FAR	Federal Acquisition Regulation
FRR	Flight Readiness Review
GFE	Government Furnished Equipment
GFP	Government Furnished Property
GFS	Government Furnished Services
GN&C	Guidance, Navigation, and Control
IDIQ	Indefinite Delivery, Indefinite Quantity
ICEPAH	ISS Commercial Element Port Accommodations Handbook
IGA	Intergovernmental Agreement
IM	Integration Milestone
IRR	Internal Rate of Return
ISS	International Space Station
JTRR	Joint Test Readiness Review
JPL	Jet Propulsion Laboratory
JSC	Johnson Space Center
LEO	Low Earth Orbit
LOI	Letter of Intent
MfgRR	Manufacturing Readiness Review
MOU	Memorandum of Understanding
NAICS	North American Industry Classification System
NASA	National Aeronautics and Space Administration
NDC	NASA Domain Consolidation
NextSTEP	Next Space Technologies for Exploration Partnerships
NID	NASA Interim Directive
NFS	NASA FAR Supplement
NOI	Notice of Intent
NPR	NASA Procedural Requirement
NSpC	National Space Council
OCI	Organizational Conflict of Interest
OFI	Offeror Fill-In
PCR	Phase Completion Review
PDR	Preliminary Design Review
PDF	Portable Document Format
POC	Point of Contact
PQR	PQR
Rndz	Rendezvous
RFS	Request for Support

RFTOP	Request for Task Order Proposal
ROI	Return on Investment
S&MA	Safety and Mission Assurance
SAE	Society of Automotive Engineers
SORR	Stage Operations Readiness Review
SOW	Statement of Work
SRR	System Requirements Review
SSP	Space Station Program
TBD	To Be Determined
TO	Task Order
TO1	Task Order 1
TO2	Task Order 2
U.S.	United States
U.S.C.	United States Code